

灵峰论坛

Topics on Sensor Scheduling in Networked Control Systems

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Chao Yang received the B.S. degree in theoretical and applied mechanics from the Department of Mechanics and Science Engineering, Peking University, Beijing, China, in 2009 and the Ph.D. degree in electronic and computer engineering from the Hong Kong University of Science and Technology, Hong Kong, in 2013. She is currently an associate professor in the Department of Automation, East China University of Science and Technology, Shanghai, China. Her research interests include networked control systems, optimal filtering, sensor scheduling, security in cyber-physical systems, and social network.

Abstract

In this talk, two topics on sensor scheduling in networked control systems will be presented. The first one is the majorization theory in sensor scheduling. The second topic is a communication-saving design by stochastic event triggers. We propose a design framework of sensor communication by using the stochastic event triggers, which aims at best saving the communication resources. We show that the communication resource is heavily reduced by this method, while the estimation performance is maintained.